



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): CHENG, Yung-chi et al.  
SERIAL NO.: 10/781,305  
FILED: February 18, 2004  
FOR: Anti-viral nucleoside analogs and methods for treating viral  
Infections, especially HIV infections  
GROUP ART UNIT: 1614  
EXAMINER: Traviss C. McIntosh III

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22331-1450

**INFORMATION DISCLOSURE STATEMENT**

SIR:

Pursuant to the Duty to Disclose under 37 C.F.R. §1.56(a), applicant encloses herewith a copy of Form PTO-1449 listing patent and other documents relevant to the background of the invention described and claimed in the above-identified application. These references were also cited in a recent Eurasian Search Report (copy enclosed). For the convenience of the Examiner, copies of the listed non-U.S. patent documents are enclosed. Copies of English translations of the Japanese patents as available (two of the three) are also provided.

Applicant respectfully requests that the Examiner consider the enclosed references in determining the patentability of the claimed invention. Applicant also requests that the Examiner return a copy of enclosed Form PTO-1449 with initials or other marks indicating that the references have been so considered. Please charge deposit account no. 04-0838 for any fee due for considering this Information Disclosure Statement.

Respectfully submitted,  
Coleman, Sudol Sapon, P.C.

By: 

Henry D. Coleman  
Reg. No. 32,559  
714 Colorado Avenue  
Bridgeport, CT 06605-1601  
(203)366-3560

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<b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>	Att'y Ref: Y03-100US	Serial No: 10/781,305
	Applicant: CHENG, Yung-chi et al.	
	Filing Date: Feb. 18, 2004	Art Unit: 1614

United States Patent Documents						
Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date
	5,739,396	04-1998	Trost et al.			

Foreign Patent Documents							
Examiner Initial	Publication Number	Publication Date	Country	Class	Subclass	Translation	
						Yes	No
	WO 2002/100415	12-2002	WIPO				
	WO 2002/069876	09-2002	WIPO				
	JP-11- 349596	12-1999	JAPAN				
	JP-06- 080688	03-1994	JAPAN				
	JP-05230058	09-1993	JAPAN				

Examiner:	Date Considered:
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered; Include a copy of this form with next communication to the applicant.	

Examiner Initial	Other Documents (by Title, Author Date, Pertinent Pages, Etc.)
	KATO KEISUKE et al.: "Enantio- and diastereoselective synthesis of 4'-alpha-substituted carbocyclic nucleosides". Tetrahedron: Asymmetry, 9(6), 911-914, 1998.
	KATO KEISUKE et al.: "Stereoselective synthesis of 4'-alpha-alkylcarbovir derivatives based on an asymmetric synthesis or chemo-enzymatic procedure", Chemical & Pharmaceutical Bulletin, 1999, 47(9), 1256-1264.
	WAGA TOSHIAKE et al.: "Synthesis and biological evaluation of 4'-C-methyl nucleosides" Nucleosides & Nucleotides 1996, 15(1-3), 287-304.
	HARAGUCHI KAZUHIRO et al.: "Allylic Substitution of 3',4'-Unsaturated Nucleosides: Organosilicon-Based Stereoselective Access to 4'-C-Branched 2',3',-Didehydro-2',3'-dideoxyribonucleosides", Journal of Organic Chemistry 1996, 61(3), 851-8.
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	KODAMA EI-ICHI et al. "4'-Ethylnyl nucleoside analogs: potent inhibitors of multidrug-resistant human immunodeficiency virus variants in vitro", Antimicrobial Agents and Chemotherapy, 2001, 45(5), 1539-1546.
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	derivatives", Journal of Medicinal Chemistry 1982, 25(10), 1184-8.
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	E. L. VODOVOZOVA et al. "New phospholipids-inhibitors of HIV reproduction. Synthesis and anti-viral activity", Bioorganic chemistry, 1996, 22(6), 451-457.
	BEREZOVSKAYA YU. V. et al.: "Creating novel molecular transport systems: the synthesis and antiviral activity of mixed succinates of deoxynucleotides and hydrophobic molecules", Pharmaceutical Chemistry Journal 35(3), 134-138, 2001.
	SEJINO KEIKO et al.: "Facile synthesis of 2',3'-unsaturated nucleosides from 2-deoxyribose", Tetrahedron Letters, 37(34), 6133-6136, 1996.
	PALOMINO EDUARDO et al. "A dihydropyridine carrier system for sustained delivery of 2',3'-dideoxynucleosides to the brain" Journal of Medicinal Chemistry, 1989, 32(3), 622-5.
	CRAMER JANINA et al.: "Exploring the Effects of Active Site Constraints on HIV-1 Reverse Transcriptase DNA Polymerase Fidelity" Journal of Biological Chemistry 2002, 277 (46). 43593-43598.
	ESTRADA ERNESTO et al.: "In Silico Studies toward the Discovery of New Anti-HIV Nucleoside Compounds with the Use of TOPS-MODE and the 2D/3D Connectivity Indices. 1. Pyrimidyl Derivatives" .Journal of Chemical Information and Computer Sciences 2002, 42(5), 1194-1203.
	MATSUDA AKIRA: "Development of novel radical cyclization-ring expansion reaction and its pharmacochemical development". Farumashia 2002, 38(4), 293-295.
	SUMMERER DANIEL et al.: "DNA polymerase selectivity: sugar interactions monitored with high-fidelity nucleodises", Angewandte Chemie, International Edition, 40 (19), 3693-3695.
	KOHGO SATORU et al. "Synthesis of the L-enantiomer of 4'-C-ethynyl-2'-deoxycytidine". Bioscience, Biotechnology and Biochemistry 2001, 65(8), 1879-1882.
	KOHGO SATORU et al.: "Development of Nucleosides highly potent against multidrug resistant HIV", Tennen Yuki Kagobutsu Toronkai Koen Yoshishu, 2000, 42 <sup>nd</sup> , 835-840.
	RIEHOKAINEN ELENA et al.: "Stereoselective synthesis of 3'-fluoro- and 3'-azido-4'-methyl-2',3;-D-glycero-pentofuranoside-5-fluorouracils" Tetrahedron, 54(34), 10161-10166, 1998.

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	OHRUI HIROSHI et al.: "Syntheses of 4'-C-Ethynyl-p-D-arabino- and 4'-C-Ethynyl-2'-deoxy-p-D-ribo-pentofuranosylpyrimidines and -purines and Evaluation of their Anti-HIV Activity", Journal of Medicinal Chemistry 2000, 43(23), 4516-4525.
	KOHGO SATORU et al. "Synthesis of 4'-C-ethynyl-p-D-Arabino- and 4'-C-ethynyl-2'-deoxy-beta-D-ribopentofuranosyl pyrimidines, and their biological evaluation", Bioscience, Biotechnology, and Biochemistry, 62(6), 1146-1149., 1999.
	NOMURA MAKOTO et al.: "Nucleosides and Nucleotides. 185. Synthesis and Biological Activities of 4'-C-Branched-Chain Sugar Pyrimidine Nucleosides", Journal of Medicinal Chemistry 1999, 42(15), 2901-2908.
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